

Listing of the Claims:

Please consider the claims as follows:

1. (Cancelled)
2. (Cancelled)
3. (Previously Presented) A system for treating bone fractures, the system comprising:
an intramedullary nail defining a longitudinal opening, a longitudinal axis, and a first intersecting transverse opening, said first transverse opening having an upper surface and a lower surface, and a second intersecting transverse opening, said second transverse opening having an upper surface and a lower surface;
a transverse member including a bone engaging portion and a connection shaft, said connection shaft being sized to pass through at least one of said first and said second said transverse openings, wherein said connection shaft is pivotally joined to said bone engaging portion; and
a set screw selectively attached to said nail in said longitudinal opening and movable along said longitudinal axis to rigidly assemble said transverse member to said nail when said connection shaft passes through one of said transverse openings and said set screw is received within said longitudinal opening.
4. (Previously Presented) The system of claim 3 wherein said transverse member further includes a connection portion extending between said connection shaft and said bone engaging portion.
5. (Previously Presented) The system of claim 3 wherein said connection shaft includes a leading portion and a trailing portion, one of said leading portion and said trailing portion includes a ball member and another of said leading portion and said trailing portion includes a socket member, said ball and socket members cooperating to permit angular variation between said leading portion and said trailing portion.
6. (Cancelled)

7. (Previously Presented) The system of claim 4 wherein said connection portion is adapted to slidably receive said bone engaging portion.

8. (Previously Presented) The system of claim 4 wherein said bone engaging portion includes a keeper, said connection portion includes an inner retaining lip, said keeper co-acting with said retaining lip to provisionally maintain said bone engaging portion and said connection portion in sliding engagement.

9. (Cancelled)

10. (Previously Presented) The system of claim 3 wherein said longitudinal opening extends at least partially therethrough and intersects said first and said second transverse [opening] openings, a portion of said longitudinal passageway being threaded to engage said set screw, said set screw including a stem portion adapted to be slidably received within said longitudinal passageway to lockingly engage said connection shaft.

11. (Previously Presented) The system of claim 3 wherein said lower surface of said first transverse opening defines a first angled portion to engage said connection shaft in an abutting relationship with said connection shaft oriented at a first oblique angle relative to said longitudinal axis.

12. (Previously Presented) The system of claim 11 wherein said upper surface of said first transverse opening defines a second angled portion generally opposite said first angled portion to engage said connection shaft when said connection shaft is oriented at said first oblique angle.

13. (Cancelled)

14. (Cancelled)

15. (Previously Presented) The system of claim 12 wherein said first and second oblique angles are each about 135 degrees.

Claims 16–48 (Cancelled)

49. (Currently Amended) A system for treating bone fractures, the system comprising:
an intramedullary nail defining a longitudinal axis, said nail defining an elongated, transverse opening laterally extending therethrough, and a longitudinal passage intersecting said opening;
a bone engaging member sized to pass through said transverse opening; and
a positioning device disposed in said longitudinal passage, the position of said device being adjustable along the longitudinal axis of said nail to longitudinally move said bone engaging member passing through said transverse opening and compress or distract said bone fracture.

50. (Previously Presented) The system of claim 49 wherein said positioning device includes a first portion and a second portion, said first portion being configured to rotate to adjust the position of said second portion along the longitudinal axis of said nail, said second portion being configured to move in correspondence with the rotation of said first portion and bear against said bone engaging member.

51. (Previously Presented) The system of claim 50 wherein said first portion includes a first threaded portion, said second portion including a second threaded portion, and wherein said second portion is transferred along the longitudinal axis of said nail as said first portion threadedly engages said second portion.

52. (Previously Presented) The system of claim 50 wherein said nail defines a threaded wall about said longitudinal passage, said first portion including a threaded portion to engage said threaded wall, and wherein said second portion is transferred along the longitudinal axis of said nail as said threaded portion threadedly engages said threaded wall and said first portion engages said second portion.

53. (Previously Presented) The system of claim 3 wherein said lower surface of said second transverse opening defines a first angled portion to engage said connection shaft in an abutting relationship with said connection shaft oriented at a first oblique angle relative to said longitudinal axis.

54. (Previously Presented) The system of claim 53 wherein said upper surface of said second transverse opening defines a second angled portion generally opposite said first angled portion to engage said connection shaft when said connection shaft is oriented at said first oblique angle.

55. (Previously Presented) The system of claim 54 wherein said first and second oblique angles are each about 135 degrees.

56. (New) A system for treating bone fractures, the system comprising:

an intramedullary nail defining a longitudinal axis, said nail defining a transverse opening having an internal surface laterally extending therethrough, the internal surface including an upper surface and a longitudinally opposite lower surface defining an internal dimension of a first size, said nail further defining a longitudinal passage intersecting said transverse opening;

at least one bone engaging member sized to pass through said transverse opening, said bone engaging member having an external dimension of a second size, said first size larger than said second size, wherein said at least one bone engaging member is movable within said transverse opening along the longitudinal axis of said nail; and

a positioning device disposed along said longitudinal passage, the position of said device being adjustable along the longitudinal axis of said nail to longitudinally adjust the relative longitudinal position of said bone engaging member with respect to said transverse opening along the longitudinal axis of said nail.

57. (New) The system of claim 56, wherein said positioning device is disposed within said longitudinal passage.

58. (New) The system of claim 56, wherein said nail has an exterior surface and said positioning device is disposed about a portion of said exterior surface.

59. (New) The system of claim 57, wherein said positioning device includes at least one transverse opening configured to receive a portion of said bone engaging member.

60. (New) The system of claim 59, wherein said positioning device includes a substantially cylindrical portion and said opening is a substantially cylindrical bore passing through said cylindrical portion.

61. (New) The system of claim 60, wherein said substantially cylindrical portion is movable

along the longitudinal axis without rotation and said positioning device includes an adjustment mechanism to longitudinally move said substantially cylindrical portion with respect to the longitudinal axis of said nail.

62. (New) The system of claim 61, wherein said longitudinal passage includes internal threads and said adjustment mechanism includes a portion with mating external threads.

63. (New) The system of claim 56, wherein said positioning device is adapted to urge said at least one bone engaging device toward said upper surface of said transverse opening.

64. (New) The system of claim 56, wherein said positioning device is adapted to urge said at least one bone engaging device toward said lower surface of said transverse opening.

65. (New) The system of claim 56, wherein said positioning device is adapted to selectively move said at least one bone engaging device longitudinally within said transverse opening to at least one of a plurality of positions between said upper surface and said lower surface.

66. (New) The system of claim 65, wherein said positioning device includes at least one transverse opening configured to receive a portion of said bone engaging member.

67. (New) The system of claim 66, wherein said positioning device includes a substantially cylindrical portion and said opening is a substantially cylindrical bore passing through said cylindrical portion.

68. (New) The system of claim 67, wherein said positioning device includes an adjustment mechanism to move said bone engaging member with respect to the longitudinal axis of said nail.

69. (New) The system of claim 68, wherein said positioning device includes a first portion having said cylindrical portion and a second portion having said adjustment mechanism.

70. (New) The system of claim 69, wherein said first portion is slidable within said longitudinal passage.

71. (New) The system of claim 70, wherein said longitudinal passage has an internal surface and said adjustment mechanism engages said internal surface.

72. (New) The system of claim 71, wherein said adjustment mechanism includes an external thread and said internal surface includes a corresponding internal thread.

73. (New) The system of claim 56, wherein at least one of said upper surface and lower surface include arcuate portions.

74. (New) The system of claim 73, wherein both said upper surface and said lower surface are at least in part arcuate.

75. (New) The system of claim 74, wherein said transverse opening is a slot.

76. (New) The system of claim 59, wherein said positioning device includes a second transverse opening adapted to receive a second bone engaging member.

77. (New) The system of claim 56 wherein said positioning device includes a first portion and a second portion, said first portion being configured to rotate to adjust the position of said second portion along the longitudinal axis of said nail, said second portion being configured to move in correspondence with the rotation of said first portion and bear against said bone engaging member.

78. (New) The system of claim 77, wherein said first portion includes a first threaded portion, said second portion including a second threaded portion, and wherein said second portion is transferred along the longitudinal axis of said nail as said first portion threadedly engages said second portion.

79. (New) The system of claim 77, wherein said nail defines a threaded wall within said longitudinal passage, said first portion including a threaded portion to engage said threaded wall, and wherein said second portion is transferred along the longitudinal axis of said nail as said threaded portion threadedly engages said threaded wall and said first portion engages said second portion.

80. (New) A system for treating bone fractures, the system comprising:

an intramedullary nail defining a longitudinal axis, said nail defining a transverse opening having an internal surface laterally extending therethrough, the internal surface including an upper surface and a longitudinally opposite lower surface defining an internal dimension of a first size, said nail further defining a longitudinal passage intersecting said transverse opening;

at least one bone engaging member sized to pass through said transverse opening, said bone engaging member having an external dimension of a second size, said first size larger than said second size, wherein said at least one bone engaging member is movable within said transverse opening along the longitudinal axis of said nail; and

a positioning device having a first portion disposed within said longitudinal passage and having at least one transverse opening configured to receive a portion of said bone engaging member, and a second portion engaged with said nail; the position of said first portion being adjustable along the longitudinal axis of said nail to longitudinally adjust the relative longitudinal position of said bone engaging member with respect to said transverse opening along the longitudinal axis of said nail.